

Appl. No. 10/632,462
Amendment fax-filed on September 12, 2005
Reply to Office Action of June 16, 2005

PATENT

REMARKS/ARGUMENTS

Claims 1, 3, 11, and 14 have been amended. Claims 1-15 remain pending. No claims have been canceled. All prior claims were rejected as allegedly being unpatentable over the cited art. Reexamination and reconsideration of the pending claims, as amended, are respectfully requested.

Amendment of the Abstract

The Abstract of the Disclosure was objected as allegedly failing to "give the gist of the claimed invention." [See Office Action of June 16, 2005, pg. 2] While Applicant respectfully submits that the objection to the Abstract does not appear to be supported by the patent statutes and rules, Applicant has amended the Abstract in an attempt to comply with the Examiner's preference of form. If the objection to the Abstract is maintained, Applicant respectfully requests that the Examiner more clearly indicate the preferred format for the Abstract. Otherwise, Applicant respectfully request that the objection to the Abstract be removed.

Rejections under 35 U.S.C. § 112, second paragraph

Claim 3 was rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. More specifically, the Office Action indicates that claim 3 has been rejected "since the recitations in the claim do not satisfy the first prong of the three-prong test for a means plus function recitation." [*Id.*] Applicant notes that claim 3 does not recite a means plus function claim element. Nonetheless, to expedite issuance of this application (rather than for substantive reason of patentability under the rules or statutes) Applicant has amended claim 3 to recite that the detector generates the first electrical signal in response to the image of a limbal structure. As such a detector and signal structure has not reasonably been shown to be taught or disclosed in the cited art, and as the structure and interaction of the detector and first electrical signal are sufficiently clear to comply with the mandates of 35 U.S.C. § 112, Applicant respectfully requests that the rejection of claim 3 be removed, and that the claim be allowed.

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Rejections under 35 U.S.C. § 102

Claims 1-5, 7, 9, 11, and 14 were rejected as allegedly being anticipated by U.S. Patent No. 4,848,340 in the name of Bille et al. (hereinafter "Bille et al."). Claims 1-5, 7-9, 11-13 were also rejected under §102 as allegedly being anticipated by U.S. Patent No. 4,856,891 in the name of Pflibsen et al. (hereinafter "Pflibsen et al."). Such rejections are traversed in part and overcome in part as follows.

U.S. Patent No. 4,848,340 in the name of Bille et al. (hereinafter "the '340 patent" describes an eye tracker and method for its use in which a reference grid 60 is marked on the cornea 30 of an eye 20 using a laser beam 64 originating at source 22. [See the '340 patent, col. 5, lines 6-19] Independent claim 1 recites an imaging system forming an image of a natural tissue structure along with a detector generating a first electrical signal in response to the image of that natural tissue structure. Clearly, the use of a natural tissue structure for stabilizing a beam of treatment light presents tremendous advantages over a system which requires imposition of a grid on the eye with a laser beam so as to effect tracking. As no teaching or suggestion for the use of natural tissue structures during corneal surgery has been shown in the cited references, Applicant respectfully submits that the claims are allowable over the '340 patent.

Independent claim 1 has also been amended to recite elements related to those of prior dependent claim 3. As amended, claim 1 now recites a laser surgery system comprising a laser making a beam of treatment light energy. The treatment light energy includes corneal ablation light energy and is deliverable to a site of an eye so as to effect reshaping of a corneal tissue at the site. Applicant notes that the Pflibsen et al. reference describes devices for directing light through the cornea and onto the back or fundus of the eye. The use of corneal ablation light energy is incompatible with such treatments through the cornea, so that the structure of claim 1 is both novel over the Pflibsen et al. and Bille et al. references, and is generally contrary to the content and use of those fundus imaging or treatment devices. Hence, independent claim 1 (and dependent claims 2-10 which depend therefrom) are also allowable over the Pflibsen et al. reference.

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Rejections under 35 U.S.C. § 103

Claims 1-7, 9, 11, and 14 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Bille et al. in combination with U.S. Patent No. 4,901,718, also in the name of Bille et al. (hereinafter "the '718 patent").

The Bille et al. reference was addressed above. Regarding the '718 patent, Applicant notes that that reference describes a laser beam guidance system for moving a laser beam in accordance with a pre-established program. [See '718 patent, Abstract] As described in the '718 application in the Summary of the Invention section: "Focusing means and means for steering the beam along selected paths are provided within the ['718] system and are programmably operated in concert to bring the laser beam into focus at pre-determined points in space." Hence, the '718 patent has not been shown to teach or reasonably suggest the system recited by claim 1, which effects stabilization of a beam in response to electrical signals generated based on a position of a natural tissue structure for treatment of the cornea.

As no reasonable combination of the cited references has been shown to teach or suggest the advantageous elements of independent claims 1 and 11, Applicant respectfully submits that all claims now pending in this application are in condition for allowance. For completeness, Applicants note that the Office Action asserts it would have been obvious to employ the laser steering device of the '718 patent in the device of the '340 patent, since the '340 patent says to do so. Applicant notes, however, that including the laser beam steering device in the grid-based '340 patent system would not result in the natural tissue structure-based tracking which can be included in embodiments of the present invention. In fact, the advantages of using such natural tissue structure-based tracking for corneal treatments provides such significant advantages that the absence of such a system in the cited references would appear to strongly support the patentability of the present claims.

Claims 10 and 15 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over the '340 patent in combination with the '718 patent, and further in combination with U.S. Patent No. 5,090,798 in the name of Kohayakawa (hereinafter "Kohayakawa"). As the Kohayakawa reference is cited solely regarding stopping of the laser treatment, Applicant submits that claims 10 and 15 are allowable for the reasons given above regarding the

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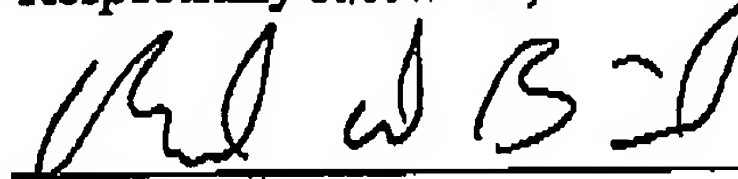
independent claims from which they depend. Additionally, Applicant notes that independent claim 10 recites safety interrupting means for interrupting delivery of the laser beam to the patient which is not reasonably been shown in the cited reference. Similarly, the automatic interruption of laser beam delivery as recited by claim 15 has not reasonably been shown.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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